



# UNITED STATES PATENT AND TRADEMARK OFFICE

*John*

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,556	10/10/2001	J.J. Garcia-Luna-Aceves	UC2000-355-2	7482
8156	7590	07/26/2005	EXAMINER	
JOHN P. O'BANION O'BANION & RITCHEY LLP 400 CAPITOL MALL SUITE 1550 SACRAMENTO, CA 95814				WILSON, ROBERT W
ART UNIT		PAPER NUMBER		
		2661		

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/975,556	GARCIA-LUNA-ACEVES ET AL.
	<b>Examiner</b> Robert W. Wilson	<b>Art Unit</b> 2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 October 2001.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 3-60 is/are allowed.
- 6) Claim(s) 1 and 2 is/are rejected.
- 7) Claim(s) 2<sup>nd</sup> instance of claim 16 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 October 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 1/11/02
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(B) as being anticipated by Loop-Free Routing Using Diffusing Computations which is an IDS document of record (Even though this reference was written by one of the applicant's it was published greater than a year before the provisional filing date).

Referring to claim 1, the reference teaches a method of determining a loop free path between nodes or routing per Abstract through Para III. Each node maintains a routing table with a successor entries for a set of nodes which are loop free at every instance per Para III. Link costs are changing because messages are being sent out that link costs are changing per Para II.

3. Claim 2 is rejected under 35 U.S.C. 102(B) as being anticipated by A Path-Finding algorithm for Loop-Free Routing which is an IDS document of record (Even though this reference was written by one of the applicant's it was published greater than a year before the provisional filing date).

Referring to claim 2, the reference teaches: An existing routing or source node has a loop free routes to all other current routers or destination nodes or predecessor information for a first loop free path per Paras 2-4. When a new router is added a 2<sup>nd</sup> loop free route is determined from an existing router to the new router or 2 loop per Paras 2-4. Each of the routes is determined via shortest path per Para2.

4. Claim 2 is rejected under 35 U.S.C. 102(B) as being anticipated by Merlin for "A FAILSAFE DISTRIBUTED ROUTING PROTOCOL" which is an IDS document of record  
Referring to claim 2, Merlin teaches a method for loop free routing thorough topological changes which results in multipath routing. Each node determines the route based upon shortest distance

to a node. Upon a topological change each node determines the route to a new preferred nodes or predecessor data or information per Abstract & Paras 1 & 4-5/ .

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merlin for “A FAILSAFE DISTRIBUTION ROUTING PROTOCOL” which is an IDS document of record in view of Selvidge (U.s. Patent No.; 5,850,537)

Referring to claim 1, Merlin teaches: A method of determining a route from each node to a destination through preferred neighbor nodes per Para 5. Upon a topological change each node determines a loop free preferred new neighbor nodes or successor based upon weights of Links per Abstract- Para 5.0.

Merlin does not expressly call for: link costs changing in time but teaches link weights as well as topological change per Para 4-5 respectively.

Selvidge teaches: weights can vary with time per col. 13 lines 33-39.

It would have been obvious to add the weights which vary with time of Selvidge to the method of Merlin because weights which vary with time are a type of topological change.

***Allowable Subject Matter***

7 The present invention is directed to a method for determining loop free multipath routing in which each node maintains a main distance table. Each node send flags are sent upon changes to the main distance table. A main link, neighbor distance table, neighbor link table, adjacent link table are also kept as well. Update message are sent from neighbors upon change of costs wherein the neighbor distance table and neighbor link table are updated.

The closest prior art is Merlin for “A FAILSAFE DISTRIBUTED ROUTING PROTOCOL” which is an IDS document of record. Merlin teaches a method of determining a loop free multipath routing in each node by maintaining a distance table.

The closest prior art does not disclose, anticipate, or render obvious the following claim limitations:

“(ii) said MDT further containing, for each destination j, successor set  $ij$ , feasible distance  $FD_{ij}$ , reported distance  $RD_{ij}$ , and flags designated as changed and report-it as claimed in claims 3, 18, 24, 37, & 49.

In Addition:

Claims 2-17 (where claim 16 is the first instance) are allowed because they depend upon the claim 3.

Claims 19-23 are allowed because they depend upon claim 18.

Claims 25-36 are allowed because they depend upon claim 24.

Claims 38-48 are allowed because they depend upon claim 37.

Claims 50-60 are allowed because they depend upon claim 49.

### *Claim Objections*

7. The second instance of Claim 16 objected to because of the following informalities:

numbering two claims as 16 is improper numbering. The examiner suggests canceling all of the claims and filing amended set of claims with the second instance of claim 16 properly numbered.

Appropriate correction is required.

### *Drawings*

8. The examiner objects to Figures 1-6 because the format that they are submitted in is not good enough quality to be in a published patent because none of the Figures have any element names or element numbers. Each Figure should have at least one element name and at least one element number. Referring to Figure 1, figure 1 should have element number 10 with element name Pseudo Code Path Initialization Algorithm. The same concept applies to Figures 2-6.

***Specification***

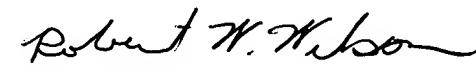
9. The examiner objects to the specification because it does not refer to the Figures via element names and element numbers. The examiner objects to section 2 in the specification because it introduces but never defines the following acronyms: DUAL, DASM, LPA, and MPDA. The examiner suggests that the applicant define the acronyms without adding new matter. Section 2 even has a sentence fragment "Furthermore, LPA is maintained loop-free at every instance." The examiner suggests amending the sentence fragment into a complete sentence without adding new matter. The examiner objects to the fact that the applicant did not supply the complete date information for the IDS reference entitled "A Simple Approximation to Minimum Delay Routing" dated 1999. If this reference was published before 10/10/99 is could possibly qualify as a 102 (B) because of the provisional filing date. Please clarify the date on this reference for the record.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

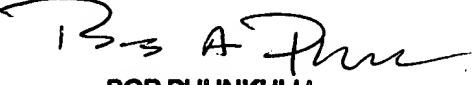
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson  
Examiner  
Art Unit 2661

RWW  
7/8/05



BOB PHUNKULH  
PRIMARY EXAMINER